IN THE CLAIMS

Please amend the claims as follows:

1. (currently amended) A method for ~~fine~~ controlling the position of a ~~predetermined~~ probe ~~location~~ relative to a fixed reference point of a probe processing apparatus ~~fixedly coupled to an auxiliary optical laser apparatus, in which method the position is controlled with optical means;~~ said method comprising ~~the steps of~~:

coupling an optical laser apparatus to said probe processing apparatus;

~~presetting~~ a position of said probe location ~~position~~ within a predetermined converging range of ~~1/4 of the wave length of the applied fine controlling~~ a positioning laser beam coming from said optical laser apparatus;

splitting said positioning laser beam ~~having a linear polarity~~ into a probe beam and a reference beam~~, whereby a respective optical beam splitting means represents said fixed reference point~~;

polarizing said probe beam and said reference beam in different directions with respect to each other;

~~re~~combining said reference beam with a reflected beam formed by said probe beam reflected from said probe location ~~with said reference beam~~;

detecting a phase difference between said reflected beam and said reference beam; and

~~fine controlling~~ adjusting a table on said probe processing apparatus for supporting said probe~~, such that the~~ to minimize said detected phase difference ~~is minimal~~.

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2. (currently amended) The method ~~according to~~ of claim 1, ~~in which the~~ wherein an angle between the polarization direction of ~~the incoming~~ said positioning laser beam and the polarization direction of said reference beam or ~~the~~ said probe beam~~, respectively,~~ is 45°.

3. (currently amended) The method ~~according to~~ of claim 1, ~~in which the~~ wherein an angle between the polarization direction of ~~the incoming~~ said positioning laser beam and the polarization direction of said reference beam or ~~the~~ said probe beam~~, respectively,~~ is selected such that the intensities of said reflected ~~probe~~ beam and reference beam are the same before said detecting ~~when entering the phase detection means are equal~~.

4. (currently amended) The method ~~according to~~ of claim 1, wherein said method further includes ~~in which the steps of splitting said positioning laser beam having a linear polarity into a probe beam and a reference beam, whereby a respective optical beam splitting means represents said fixed reference point, polarizing said probe beam and said reference beam in different directions to each other, recombining a beam reflected from said probe location with said reference beam, detecting a phase difference between said reflected beam and said reference beam and fine controlling a table supporting said probe, such that the detected phase difference is minimum, are each repeated continuously~~ repeating said detecting and said adjusting for a plurality of probe locations ~~while~~ when scanning a continuous surface portion of said probe ~~surface~~.

5. (currently amended) The method ~~according to~~ of claim 1, wherein said splitting is performed by a polarizing beam splitter ~~auxiliary optical laser apparatus performs a free controlled auto focusing of a laser beam associated with said probe processing apparatus~~.

6. (currently amended) The method ~~according to~~ of claim 1, wherein said setting further includes setting said position of said probe location within a predetermined converging range of 1/4 of the wavelength of said positioning laser beam ~~in which said auxiliary optical laser apparatus contributes to perform a free focusing of a microscope apparatus acting as said probe processing apparatus~~.

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7. (currently amended) An apparatus ~~method~~ for ~~fine~~-controlling the position of a ~~predetermined~~ probe ~~location~~ relative to a fixed reference point of a probe processing apparatus ~~fixedly coupled to an auxiliary optical laser apparatus~~, said apparatus comprising:

means for coupling an optical laser apparatus to said probe processing apparatus;

means for ~~pre~~setting a position of said probe location ~~position~~ within a predetermined converging range of ~~1/4 of the wave length of the applied fine controlling~~ a positioning laser beam coming from said optical laser apparatus;

means for splitting said positioning laser beam ~~having a linear polarity~~ into a probe beam and a reference beam~~, whereby a respective optical beam splitting means represents said fixed reference point~~;

means for polarizing said probe beam and said reference beam in different directions to each other;

means for ~~re~~combining said reference beam with a reflected beam formed by said probe beam reflected from said probe location ~~with said reference beam~~;

means for detecting a phase difference between said reflected beam and said reference beam; and

means for ~~fine controlling~~ adjusting a table on said probe processing apparatus for supporting said probe~~, such that the~~ to minimize said detected phase difference ~~is minimal~~.

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8. (currently amended) The apparatus ~~according to~~ of claim 7, wherein ~~in which~~ said splitting means ~~for splitting said positioning laser beam having a linear polarity into a probe beam and a reference beam, whereby a respective optical beam splitting means represents said fixed reference point and said means for polarizing said probe beam and said reference beam in different directions to each other comprises~~ is a polarizing beam splitter.

9. (currently amended) The apparatus ~~according to~~ of claim 7, wherein said detecting means ~~for detecting said phase difference comprises~~ includes:

~~either~~ a quarter-wave-plate or a Babinet-Soleil-Compensator for modifying the polarity of said recombined beam; and

~~a polarizing beam splitter post connected thereto; and~~

a pair of photo detection means~~,~~ for sensing the respective intensity of ~~the~~ said split beams ~~for control purposes~~.

Please add Claims 10-11 as follows:

10. (new) The apparatus of claim 7, wherein an angle between the polarization direction of said positioning laser beam and the polarization direction of said reference beam or said probe beam is 45°.

11. (new) The apparatus of claim 7, wherein an angle between the polarization direction of said positioning laser beam and the polarization direction of said reference beam or said probe beam is selected such that the intensities of said reflected beam and reference beam are the same before entering said detecting means.

12. (new) The apparatus of claim 7, wherein said setting means further includes means for setting said position of said probe location within a predetermined converging range of 1/4 of the wavelength of said positioning laser beam.

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13. (new) The apparatus of claim 7, wherein said adjusting means further includes means for moving said table on said probe processing apparatus in directions orthogonal to said probe beam.

14. (new) The method of claim 1, wherein said adjusting further includes moving said table on said probe processing apparatus in directions orthogonal to said probe beam.

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